

CENTER FOR DRUG EVALUATION AND RESEARCH

Approval Package for:

Application Number : 074730

**Trade Name : LOPERAMIDE HYDROCHLORIDE ORAL
SOLUTION 1MG/5ML**

**Generic Name: Loperamide Hydrochloride Oral Solution
1mg/5ml**

Sponsor : Morton Grove Pharmaceuticals, Inc.

Approval Date: August 28, 1997

CENTER FOR DRUG EVALUATION AND RESEARCH

APPLICATION 074730

CONTENTS

	Included	Pending Completion	Not Prepared	Not Required
Approval Letter	X			
Tentative Approval Letter				
Approvable Letter				
Final Printed Labeling	X			
Medical Review(s)				
Chemistry Review(s)	X			
EA/FONSI				
Pharmacology Review(s)				
Statistical Review(s)				
Microbiology Review(s)				
Clinical Pharmacology Biopharmaceutics Review(s)				
Bioequivalence Review(s)	X			
Administrative Document(s)				
Correspondence				

CENTER FOR DRUG EVALUATION AND RESEARCH

Application Number 074730

APPROVAL LETTER

AUG 28 1997

Morton Grove Pharmaceuticals, Inc.
Attention: Maurice E. Bordoni
6451 West Main Street
Morton Grove, IL 60053
|||||

Dear Sir:

This is in reference to your abbreviated new drug application dated August 14, 1995, submitted pursuant to Section 505(j) of the Federal Food, Drug, and Cosmetic Act, for Loperamide Hydrochloride Oral Solution, 1 mg/5 mL.

Reference is also made to your amendments dated January 9, 1996; and June 27 and August 13, 1997.

We have completed the review of this abbreviated application and have concluded that the drug is safe and effective for use as recommended in the submitted Over-The-Counter (OTC) labeling. Accordingly, the application is approved. The Division of Bioequivalence has determined your Loperamide Hydrochloride Oral Solution, 1 mg/5 mL, to be bioequivalent to the listed drug (Imodium® A-D Liquid, 1 mg/5 mL of McNeil Consumer Products Co.).

Under 21 CFR 314.70, certain changes in the conditions described in this abbreviated application require an approved supplemental application before the change may be made.

Post-marketing reporting requirements for this abbreviated application are set forth in 21 CFR 314.80-81. The Office of Generic Drugs should be advised of any change in the marketing status of this drug.

Sincerely yours.

/S/

Douglas L. Sporn
Director
Office of Generic Drugs
Center for Drug Evaluation and Research

8/28/97

CENTER FOR DRUG EVALUATION AND RESEARCH

APPLICATION NUMBER 074730

FINAL PRINTED LABELING

28 1997

**LOPERAMIDE
HYDROCHLORIDE
ORAL SOLUTION**

Anti-Diarrheal

**Original
Prescription
Strength**

**Controls the symptoms
of diarrhea,
including Travelers' Diarrhea.**

**Pleasant tasting
cherry flavor.**

**Convenient dosage
cup enclosed**

**Manufactured By:
Morton Grove Pharmaceuticals, Inc.
Morton Grove, IL 60053**

BOXALL, INC.

MGP

NDC 60432-742-60

**LOPERAMIDE
HYDROCHLORIDE
ORAL SOLUTION**

Anti-Diarrheal

**Controls the symptoms
of diarrhea,
including Travelers' Diarrhea**

Original Prescription Strength

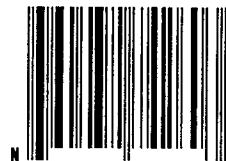
Cherry flavored

Store at room temperature

**Each teaspoonful (5 mL) contains:
Loperamide HCl 1 mg
Alcohol 5%**

SAFETY SEALED BOTTLE

NET: 2 fl oz (60 mL)



3 60432-742-60 3

NET: 2 fl oz (60 mL)
Original Prescription Strength

LOPERAMIDE HYDROCHLORIDE ORAL SOLUTION

NDC 60432-742-60

LOPERAMIDE HYDROCHLORIDE ORAL SOLUTION

Anti-Diarrheal

Original
Prescription
Strength

Controls the symptoms
of diarrhea,
including Travelers' Diarrhea.

Pleasant tasting
cherry flavor.

Convenient dosage
cup enclosed

See top flap for expiration date.
Store at room temperature.

Manufactured By:
Morton Grove Pharmaceuticals, Inc.
Morton Grove, IL 60053



5-50-8742-60
ISS. 11-96

Loperamide hydrochloride oral solution is for the effective treatment of diarrhea. Loperamide hydrochloride oral solution relieves diarrhea, often in just one dose, in both adults and children 6 years and older.

INDICATIONS: Loperamide Hydrochloride Oral Solution controls the symptoms of diarrhea, including Travelers' Diarrhea.



DIRECTIONS: Use the enclosed dosage cup to accurately measure Loperamide Hydrochloride Oral Solution as noted below. Drink plenty of clear fluids to help prevent dehydration, which may accompany diarrhea.

ADULTS AND CHILDREN 12 YEARS OF AGE AND OLDER

1st dose		2nd dose, if needed	
----------	---	---------------------	---



Take 4 teaspoonfuls (1 dosage cup) after the first loose bowel movement and 2 teaspoonfuls after each subsequent loose bowel movement but no more than 8 teaspoonfuls a day for no more than 2 days.

CHILDREN 9 TO 11 YEARS (60 TO 95 LBS)

1st dose		2nd dose, if needed	
----------	---	---------------------	---

Take 2 teaspoonfuls (1/2 dosage cup) after the first loose bowel movement and 1 teaspoonful after each subsequent loose bowel movement but no more than 6 teaspoonfuls a day for no more than 2 days.

CHILDREN 6 TO 8 YEARS (48 TO 88 LBS)

1st dose		2nd dose, if needed	
----------	---	---------------------	---

Take 2 teaspoonfuls (1/2 dosage cup) after the first loose bowel movement and 1 teaspoonful after each subsequent loose bowel movement but no more than 4 teaspoonfuls a day for no more than 2 days.

Children under 6 years old (up to 47 lbs). Consult a physician. Not intended for use in children under 6 years old.

WARNINGS: KEEP THIS AND ALL DRUGS OUT OF THE REACH OF CHILDREN. Do not use for more than two days unless directed by a physician. **DO NOT USE IF DIARRHEA IS ACCOMPANIED BY HIGH FEVER (GREATER THAN 101 °F), OR IF BLOOD OR MUCUS IS PRESENT IN THE STOOL, OR IF YOU HAVE HAD A RASH OR OTHER ALLERGIC REACTION TO LOPERAMIDE HCL.** If you are taking antibiotics or have a history of liver disease, consult a physician before using this product. As with any drug, if you are pregnant or nursing a baby, seek the advice of a health professional before using this product. In case of accidental overdose, seek professional assistance or contact a poison control center immediately.

ACTIVE INGREDIENT: Loperamide HCl 1 mg per teaspoonful (5 mL).

INACTIVE INGREDIENTS: Citric Acid, USP; Flavors; Glycerin, USP; Methylparaben, NF; Propylparaben, NF; Purified Water, USP; Saccharin Sodium, USP; Sodium Citrate, USP and Sorbitol Solution, USP.

**LOPERAMIDE
HYDROCHLORIDE
ORAL SOLUTION**

Anti-Diarrheal

**Original
Prescription
Strength**

**Controls the symptoms
of diarrhea,
including Travelers'
Diarrhea.**

**Pleasant tasting
cherry flavor.**

**Convenient dosage
cup enclosed**

**Manufactured By:
Morton Grove Pharmaceuticals, Inc.
Morton Grove, IL 60053**

BOXALL, INC.

MGP

NDC 60432-742-04

**LOPERAMIDE
HYDROCHLORIDE
ORAL SOLUTION**

**Anti-Diarrheal
Controls the symptoms
of diarrhea,
including Travelers'
Diarrhea**

Original Prescription Strength

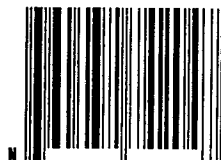
Cherry flavored

Store at room temperature

Each teaspoonful (5 mL) contains:
Loperamide HCl 1 mg
Alcohol 5%

SAFETY SEALED BOTTLE

NET: 4 fl oz (118 mL)



3 60432-742-04 7

LOPERAMIDE HYDROCHLORIDE ORAL SOLUTION

Anti-Diarrheal

**Original
Prescription
Strength**

**Controls the symptoms
of diarrhea,
including Travelers'
Diarrhea.**

**Pleasant tasting
cherry flavor.**

**Convenient dosage
cup enclosed**

See top flap for expiration date.
Store at room temperature.

Manufactured By:
Morton Grove Pharmaceuticals, Inc.
Morton Grove, IL 60053

5-50-8742-04
ISS. 11-96

NET: 4 fl oz (118 mL)
Original Prescription Strength

LOPERAMIDE HYDROCHLORIDE ORAL SOLUTION



NDC 60432-742-04

Loperamide hydrochloride oral solution is for the effective treatment of diarrhea. Loperamide hydrochloride oral solution relieves diarrhea, often in just one dose, in both adults and children 6 years and older.

INDICATIONS: Loperamide Hydrochloride Oral Solution controls the symptoms of diarrhea, including Travelers' Diarrhea.

DIRECTIONS: Use the enclosed dosage cup to accurately measure Loperamide Hydrochloride Oral Solution as noted below. Drink plenty of clear fluids to help prevent dehydration, which may accompany diarrhea.

ADULTS AND CHILDREN 12 YEARS OF AGE AND OLDER

1st dose		2nd dose, if needed	
----------	--	---------------------	---

Take 4 teaspoonfuls (1 dosage cup) after the first loose bowel movement and 2 teaspoonfuls after each subsequent loose bowel movement but no more than 8 teaspoonfuls a day for no more than 2 days.

CHILDREN 9 TO 11 YEARS (60 TO 95 LBS)

1st dose		2nd dose, if needed	
----------	--	---------------------	---

Take 2 teaspoonfuls (1/2 dosage cup) after the first loose bowel movement and 1 teaspoonful after each subsequent loose bowel movement but no more than 6 teaspoonfuls a day for no more than 2 days.

CHILDREN 6 TO 8 YEARS (46 TO 59 LBS)

1st dose		2nd dose, if needed	
----------	---	---------------------	--

Take 2 teaspoonfuls (1/2 dosage cup) after the first loose bowel movement and 1 teaspoonful after each subsequent loose bowel movement but no more than 4 teaspoonfuls a day for no more than 2 days.

Children under 6 years old (up to 47 lbs): Consult a physician. Not intended for use in children under 6 years old.

WARNINGS: KEEP THIS AND ALL DRUGS OUT OF THE REACH OF CHILDREN. Do not use for more than two days unless directed by a physician. **DO NOT USE IF DIARRHEA IS ACCOMPANIED BY HIGH FEVER (GREATER THAN 101°F), OR IF BLOOD OR MUCUS IS PRESENT IN THE STOOL, OR IF YOU HAVE HAD A RASH OR OTHER ALLERGIC REACTION TO LOPERAMIDE HCl.** If you are taking antibiotics or have a history of liver disease, consult a physician before using this product. As with any drug, if you are pregnant or nursing a baby, seek the advice of a health professional before using this product. In case of accidental overdose, seek professional assistance or contact a poison control center immediately.

ACTIVE INGREDIENT: Loperamide HCl 1 mg per teaspoonful (5 mL).

INACTIVE INGREDIENTS: Citric Acid, USP; Flavors; Glycerin, USP; Methylparaben, NF; Propylparaben, NF; Purified Water, USP; Saccharin Sodium, USP; Sodium Citrate, USP and Sorbitol Solution, USP.

MGP

NDC 60432-742-60

**LOPERAMIDE
HYDROCHLORIDE
ORAL SOLUTION**

Anti-Diarrheal
Controls the Symptoms of Diarrhea
Cherry flavored

Store at room temperature

Each teaspoonful (5 mL) contains:
Loperamide HCl 1 mg
Alcohol 5%

DO NOT USE IF BAND PRINTED "SEALED
FOR YOUR PROTECTION" AROUND CAP
IS BROKEN OR MISSING.

NET: 2 fl oz (60 mL)

[illegible]

Loperamide Hydrochloride Oral Solution
ANDA # 74-730

MGP

NDC 60432-742-04

**LOPERAMIDE
HYDROCHLORIDE
ORAL SOLUTION**

Anti-Diarrheal
Controls the Symptoms of Diarrhea
Cherry flavored

Store at room temperature

Each teaspoonful (5 mL) contains:
Loperamide HCl _____ 1 mg
Alcohol 5%

DO NOT USE IF BAND PRINTED "SEALED
FOR YOUR PROTECTION" AROUND CAP
IS BROKEN OR MISSING.

NET: 3 fl oz (118 mL)

WARNINGS: KEEP THIS AND ALL DRUGS OUT OF THE REACH OF CHILDREN. Do not use for more than two days unless directed by a physician. **DO NOT USE IF DIARRHEA IS ACCOMPANIED BY HIGH FEVER (GREATER THAN 101 °F), OR IF BLOOD OR MUCUS IS PRESENT IN THE STOOL, OR IF YOU HAVE HAD A RASH OR OTHER ALLERGIC REACTION TO LOPERAMIDE HCl.** If you are taking antibiotics or have a history of liver disease, consult a physician before using this product. As with any drug, if you are pregnant or nursing a baby, seek the advice of a health professional before using this product. In case of accidental overdose, seek professional assistance or contact a poison control center immediately.

ACTIVE INGREDIENT: Loperamide HCl 1 mg per teaspoonful (5 mL).

INACTIVE INGREDIENTS: Citric Acid, USP; Flavors; Glycerin, USP; Methylparaben, NF; Propylparaben, NF; Purified Water, USP; Saccharin Sodium, USP; Sodium Citrate, USP; Sorbitol Solution, USP.

Manufactured By:

Morton Grove Pharmaceuticals, Inc.
Morton Grove, IL 60053

CENTER FOR DRUG EVALUATION AND RESEARCH

APPLICATION NUMBER **074730**

CHEMISTRY REVIEW(S)

1. CHEMISTRY REVIEW NO. 4
2. ANDA #74-730
3. NAME AND ADDRESS OF APPLICANT
Morton Grove Pharmaceuticals, Inc.
6451 West Main Street
Morton Grove, IL 60053
4. BASIS OF SUBMISSION
There are no patents that claim the referenced listed drug in this application.
5. SUPPLEMENT(s)
N/A
6. PROPRIETARY NAME
N/A
7. NONPROPRIETARY NAME
Loperamide HCl
8. SUPPLEMENT(s) PROVIDE(s) FOR:
N/A
9. AMENDMENTS AND OTHER DATES:
August 14, 1995-- Original Submission
September 20, 1995-- Acknowledgment letter
September 28, 1995-- New Correspondence
January 9, 1996-- Amendment
January 30, 1996-- Bio letter--Satisfactory
March 15, 1996-- Deficiency letter
April 25, 1996-- Amendment
September 18, 1996--Deficiency letter
October 25, 1996-- Telecom--Chemistry
October 29, 1996-- Amendment
October 30, 1996-- Telecom--Labeling
November 13, 1996-- Telecom--Chem and Labeling
December 6, 1996-- Amendment (Labeling)
January 3, 1997-- Telecom--Chemistry
January 15, 1997-- Telecom Amendment
May 20, 1997-- MV Memo--Detroit District Lab--Def.
June 26, 1997-- Deficiency letter pertaining to the MV
June 27, 1997-- Amendment--MV
August 5, 1997-- MV Memo--Detroit District Lab--
Acceptable with modifications
August 13, 1997-- Amendment--MV post-approval commitments
10. PHARMACOLOGICAL CATEGORY
Antidiarrheal
11. Rx or OTC
OTC
12. RELATED DMFs

(b)4 - Confidential Business

(b)4 - Confidential Business

13. DOSAGE FORM
Solution
14. POTENCY
1 mg/5 mL
15. CHEMICAL NAME AND STRUCTURE
4-(P-Chlorophenyl)-4-Hydroxy-N, N-Dimethyl-A, A-Diphenyl-1-Piperidinebutyramide
16. RECORDS AND REPORTS
N/A
17. COMMENTS
The post-approval drug product will be reformulated to reduce the alcohol content from (b)4 (b)4 in compliance with 21 CFR 328.10 (telecom memo dated 10/25/96).

MV found acceptable with modifications. A post-approval commitment to validate the recommended modification (i.e., sample and standard should be prepared distinctly acidic) to the analytical method 8742A is appended.
18. CONCLUSIONS AND RECOMMENDATIONS
Recommend approval letter to issue.
19. REVIEWER:
[Redacted] /S/
- DATE COMPLETED:
August 18, 1997
8/18/97

CENTER FOR DRUG EVALUATION AND RESEARCH

APPLICATION NUMBER 074730

BIOEQUIVALENCE REVIEW(S)

D10

OFFICE OF GENERIC DRUGS
DIVISION OF BIOEQUIVALENCE

ANDA/AADA #74-730

SPONSOR: Morton Grove

DRUG: loperamide hydrochloride

DOSAGE FORM: oral solution

STRENGTHS/(s): 1 mg/5 mL

TYPE OF STUDY: N/A

WAIVER:

The type and amount of active ingredient (loperamide hydrochloride), conditions of use, route of administration, dosage form, strength, and labeling for loperamide hydrochloride oral solution are identical to the RLD product Imodium A-D®. The test product and RLD formulations are not qualitatively identical. All excipient concentrations in the test formulation appear to be within approved limits (Inactive ingredients Guide, 10/93).

Therefore, waiver of in vivo bioequivalence requirements may be granted for the test product loperamide hydrochloride oral solution 1 mg/5 mL under 21 CFR 320.22(b) (3).

PRIMARY REVIEWER: James D. Henderson, Ph.D. **BRANCH:** II
INITIAL: [redacted] /S/ [redacted] **DATE** 1-22-96

BRANCH CHIEF: Rabindra N. Patnaik, Ph.D. **BRANCH:** II
INITIAL: [redacted] /S/ [redacted] **DATE** 1/22/96

DIRECTOR, DIVISION OF BIOEQUIVALENCE:

Keith K. Chan, Ph.D.
INITIAL: [redacted] /S/ [redacted] **DATE** 1/24/96

ANDA 74-730

JVL Corporation
A Delaware Corporation
Attention: Doranne Frano
6451 West Main Street
Morton Grove IL 60053

JAN 30 1996

Dear Madam:

Reference is made to your abbreviated new drug application dated August 14, 1995, submitted pursuant to Section 505 (j) of the Federal Food, Drug and Cosmetic Act for Loperamide Hydrochloride Oral Solution, 1 mg/5 mL.

The following comments pertain only to bioequivalency issues in the August 14, 1995 submission.

The Division of Bioequivalence has completed its review and has no further questions at this time.

Please note that the bioequivalency comments expressed in this letter are preliminary. The above bioequivalency comments may be revised after review of the entire application, upon consideration of the chemistry, manufacturing and controls, microbiology, labeling or other scientific or regulatory issues. A revised determination may require additional information and/or studies, or may conclude that the proposed formulation is not approvable.

Sincerely yours,



/S/

Keith K. Chan, Ph.D.
Director, Division of Bioequivalence
Office of Generic Drugs
Center for Drug Evaluation and Research

JAN 22 1996

Loperamide Hydrochloride
1 mg/5 mL oral solution
ANDA #74-730
Reviewer: James D. Henderson
File: 74730W.895

Morton Grove Pharmaceuticals
Morton Grove, IL
Submitted:
August 14, 1995

REVIEW OF A WAIVER REQUEST

Background:

The sponsor has submitted an ANDA for its test product loperamide hydrochloride oral solution 1 mg/5 mL. The reference listed drug (RLD) is Imodium A-D® 1 mg/5 mL (McNeil Consumer Products, NDA #19-487, approved 3/1/88). In the Orange Book, 15th ed., 1995, p. 3-309, the RLD is listed under the dosage form heading "solution; oral".

Comments:

1. The sponsor states that the type and amount of active ingredient (loperamide hydrochloride), conditions of use, route of administration, dosage form, strength, and labeling for loperamide hydrochloride oral solution are identical to the RLD product Imodium A-D®.
2. The sponsor requests waiver of in vivo bioequivalence study requirements based on the following conditions of 21 CFR 320.22(b)(3):
 - the test product and RLD are both oral solutions containing the same AI in the same concentration and dosage form
 - The test product contains no inactive ingredient or other change in formulation from the RLD that may significantly affect absorption of the AI.
3. The test and reference product formulations are shown in Table 1. The formulations are not qualitatively identical. All excipient concentrations in the test formulation appear to be within approved limits (see footnotes to Table 1).

Recommendation:

The Division of Bioequivalence agrees that the information submitted by Morton Grove Pharmaceuticals demonstrates that loperamide hydrochloride oral solution 1 mg/5 mL falls under 21 CFR Section 320.22(b)(3) of the Bioavailability/Bioequivalence Regulations. The waiver of in vivo bioequivalence study for the test product 1 mg/5 mL oral solution is granted. From the bioequivalence point of view, the test product is deemed bioequivalent to the reference product Imodium® A-D (oral solution 1 mg/5 mL) manufactured by McNeil Consumer Products.

/S/

James D. Henderson, Ph.D.
Review Branch II
Division of Bioequivalence

/S/

RD INITIALED RPATNAIK
FT INITIALED RPATNAIK

1/22/96

JDH/gj/1-22-96/74730

cc: ANDA #74-730 (original, duplicate), HFD-600 (Hare), HFD-630,
HFD-344 (CViswanathan), HFD-655 (Patnaik, Henderson), Drug
File, Division File